# Driver
# User Manuals

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- Login
- Spread
- Mount/Demount (Plough)
- Unloading The Gritter
- Brine Tank Filling
- Alarms
- Adjust Display, End Route, Lights & Logout.


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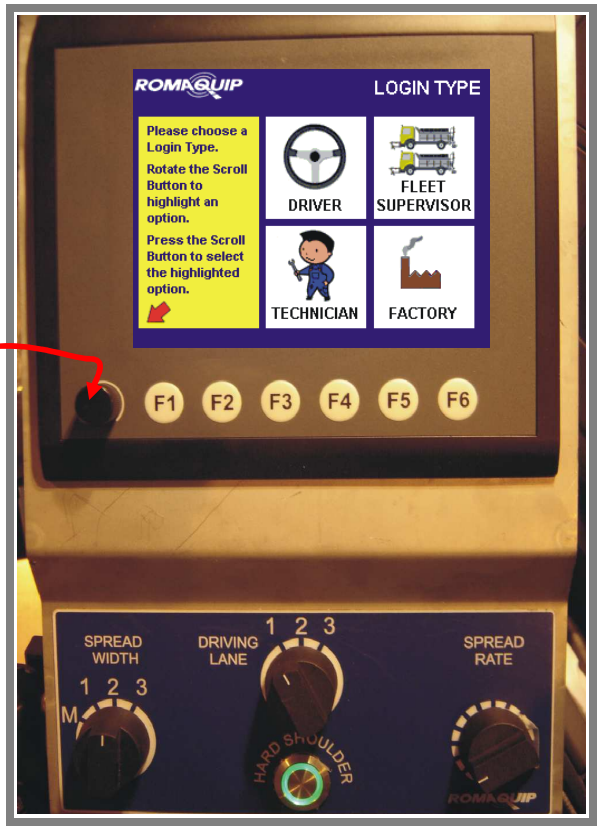
# LOGIN

Note: When using the scroll button to scroll to a desired setting, a red box will indicate which setting is currently been highlighted




***Scroll Button***

The above screen shows the main login screen this will be displayed a few seconds after the ignition is switched on. Firstly the ***loading*** screen will appear then the main login screen.

**The reset switch has to be pressed first before login can commence. The reset switch is located at the left side of the box.**

Spread Rate switch works on any page as long as you are logged in.

To login as a driver, scroll to DRIVER using the scroll button and press the scroll button to accept.
The following screen will appear.

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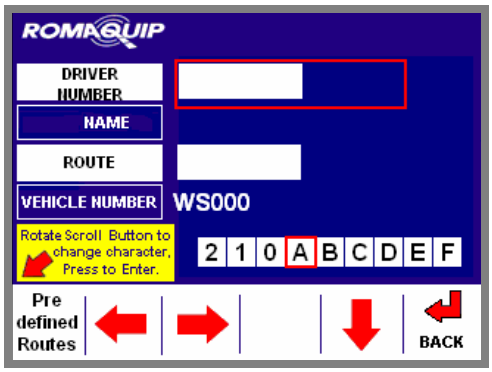
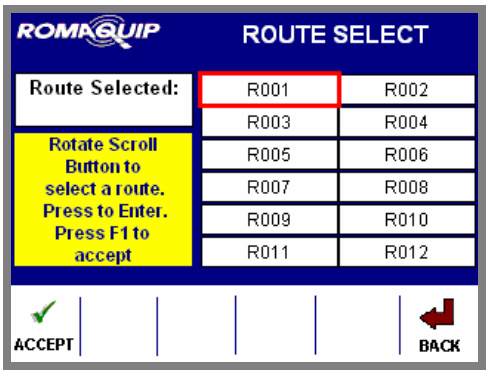



**Driver Number – 0001 to 0012 (Inclusive)**
**Route – R001 to R012 (Inclusive)**

To input the driver number use the scroll button to select the appropriate Number. Press the scroll button to accept the letter. This has to be done for each individual number. When the driver number e.g. "0001" has been inputted press F5 to toggle to the route box, ✔ will appear next to the driver number if a correct number has been inputted.

To select 1 of the predefined routes press F1.

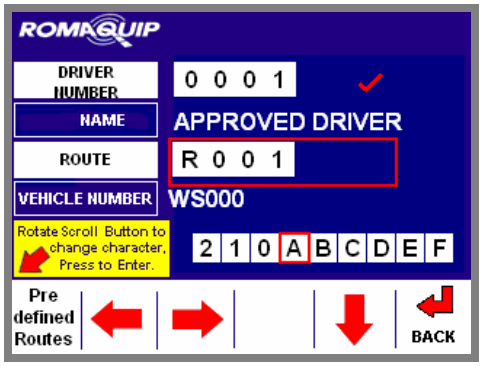
The following screen will appear.




Using the scroll button scroll to the desired route number and press the scroll button to enter the route, press F1 to accept.

For example we will choose "R001"

The following screen will appear.




Press F5 to confirm login details, the following screen will appear.

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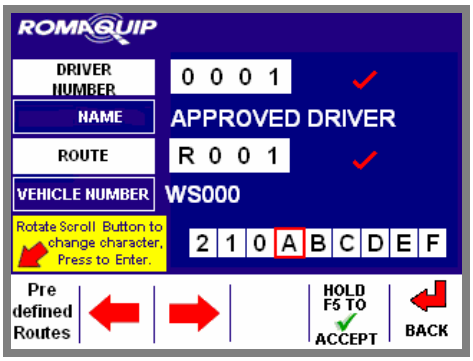
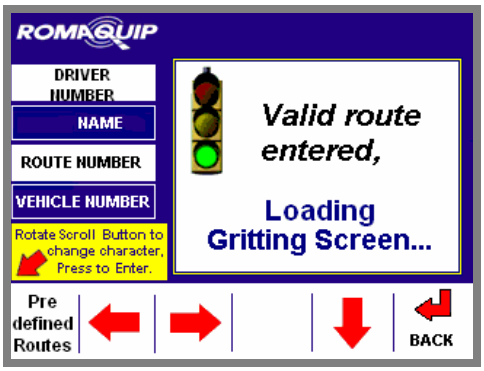
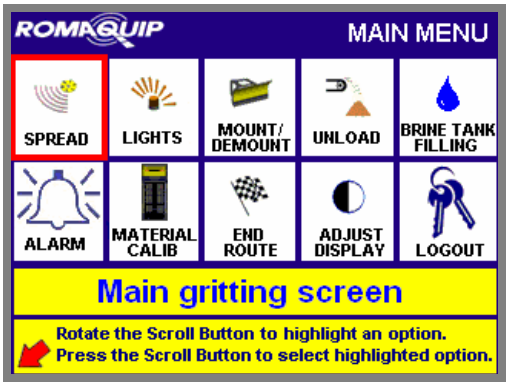



If the details have been accepted as correct, press and hold F5 to accept.
The following screen will appear.




This shows login was successful (a valid route was entered) and settings are been loaded.
The main screen will appear.




This is the main gritting screen.

**Login Complete**

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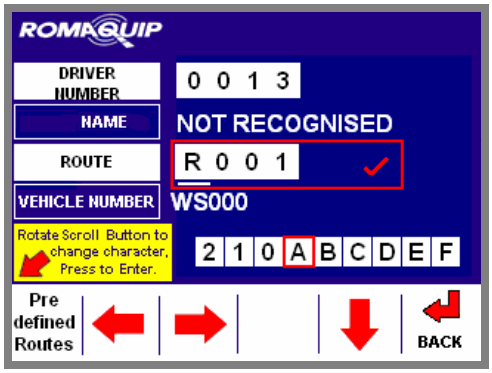
**If the login details are not inputted correctly**

The following screen will appear if either of the login details are incorrect.




The example above shows the Driver Number “0013” which is not recognized.
To change this, press F5 to toggle to the supervisor number box.
Press F2 or F3 to move the cursor to the number that needs to be changed, then using the scroll button select the correct number and press the scroll button to accept.

Press F5 to login.

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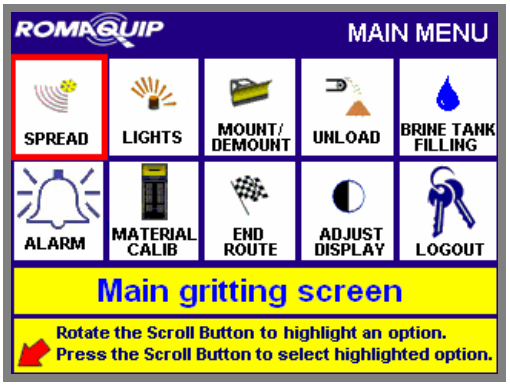
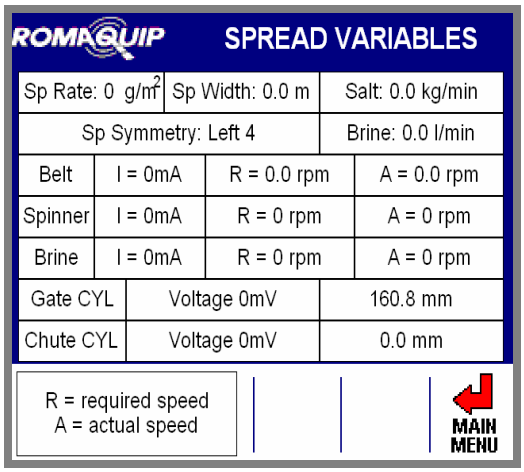
# Information:




When on the main menu screen above, press and hold F1 & F2 Simultaneously
The following screen will appear.




This screen will display all the spread variables, such as the belt & spinner speeds.
R=Required Speed
A=Actual Speed
I=Current

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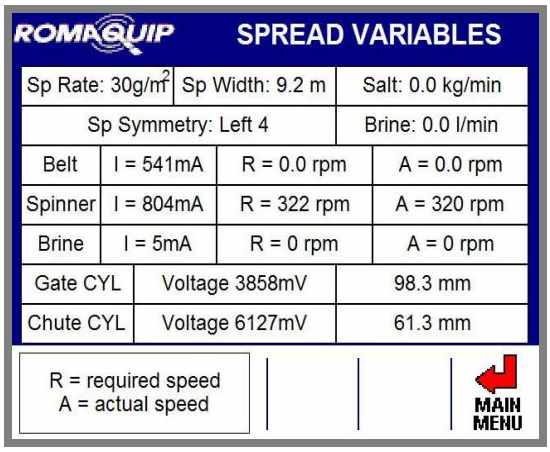


The example above shows the variables with the truck traveling at 40km/h with the gritter spreading 2 lanes and hard shoulder (Sp Width: 9.2m), driving in lane 2 with the spread width (Sp Rate) at 30g/m².
The Gate cylinder is set to 98.3mm and the chute cylinder is set too 61.3mm, this is set automatically depending on the spread pattern required.
The spinner fro example is giving a feedback current of 804Ma, the required speed is 322rpm & the actual spinner rpm is 320rpm.

**To return to the main menu press F6.**

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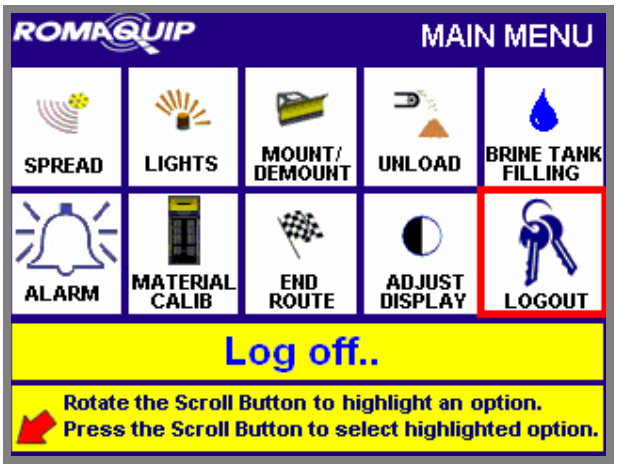
# User Manual

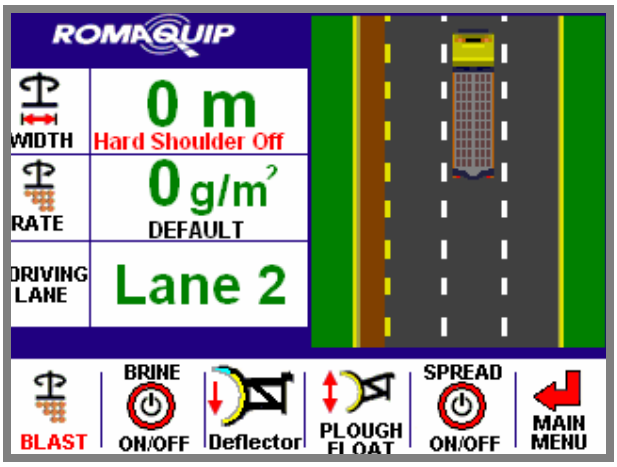
# Spread

# SPREAD

Note: When using the scroll button to scroll to a desired setting, a red box will indicate which setting is currently been highlighted




Using the scroll button, scroll to SPREAD.
Press the scroll button to select.
The screen below will appear.




This screen shows the spread width, driving late, rate of salt.
To set up these values the switches on the box will have to be used
See next page for example.

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The picture above shows the PDM screen and Box mounted in the Cab of the truck.

On the bottom of the picture we have 4 switches for Spread width, Driving Lane, Spread Rate & Hard Shoulder; these switches control the inputs for the values that appear on the screen.
The example shown above shows the spread width 2 which is 1 lane, the hard shoulder is on, the driving lane is Lane 1 with the spread rate at 15g/m2.
The illustration on the right will show which lane the lorry is driving in and how many lanes it is spreading too.
Any changes made on the switches will be reflected on the screen.

(The switches are all rotary switches except for the hard shoulder which is an illuminated (Green) push button switch)

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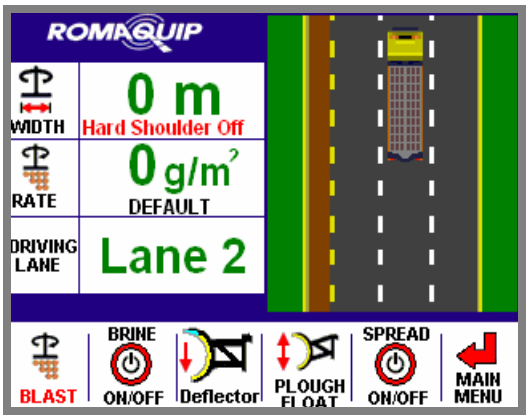
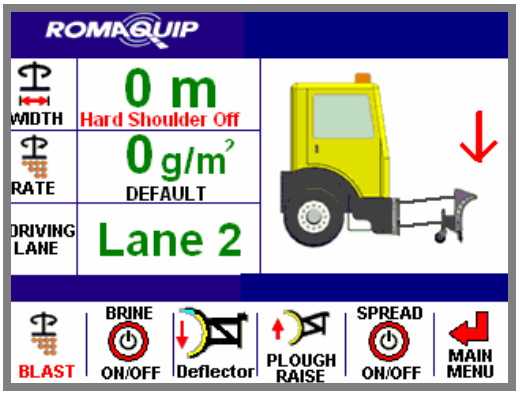
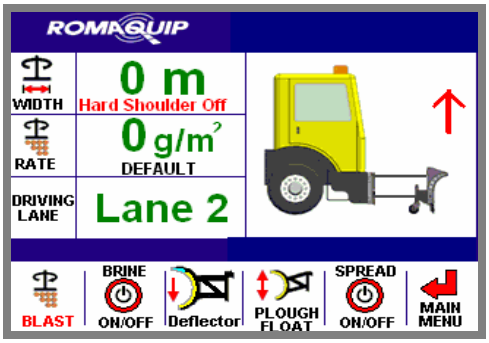



Going back to the first screen that is shown when you enter the spread settings.
When the hard shoulder button is presses the hard shoulder icon will turn green.
F3 can be used to move the plough deflector UP & DOWN
Press & hold F4 to put the plough into the float position when you do this the following screen will appear. Float can only be enabled when the truck is traveling under 30km/h.




The illustration shows the plough been put into the float position. This screen will be flashed up for 5 seconds to show the plough moving into the float position before reverting back to the main spreading screen.
Press F5 to raise the plough into its original position.
The following screen will appear.

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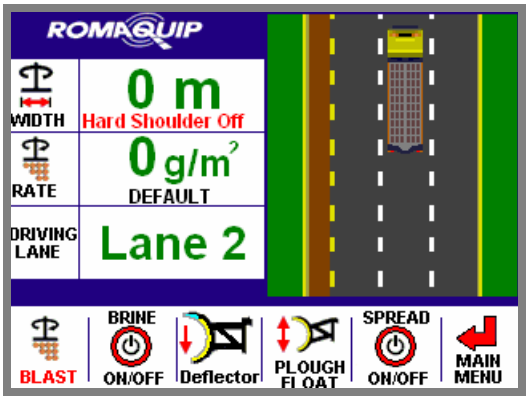
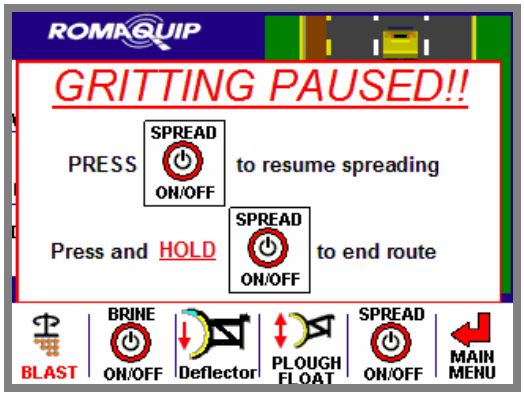
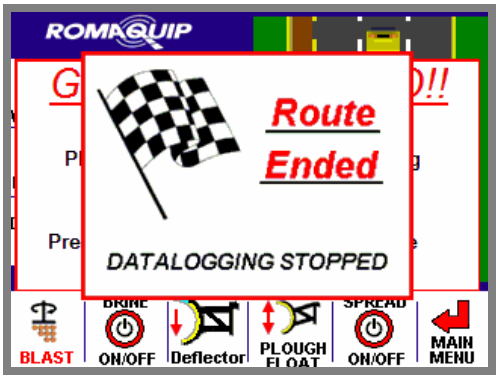
The illustration shows the plough been raised. This screen will be flashed up for 5 seconds to show the plough been raised before reverting back to the main spreading screen.




After all settings have been inputted, press F5 to turn on the spreading.
When the driver is logged in, he has already logged in his route to spreading will start immediately. However if spreading is stopped while the driver is logged in a new route will have to be entered.
To pause spreading press F5, the following screen will appear.




When gritting is paused rear beacons will stop & gate remains open.
Note: Spinner stays on for three seconds after spreading paused or stopped.
To resume spreading press F5, to end route and stop datalogging press and hold F5, the following screen will appear.

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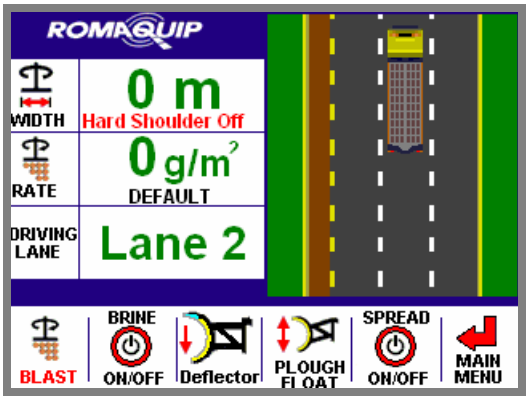
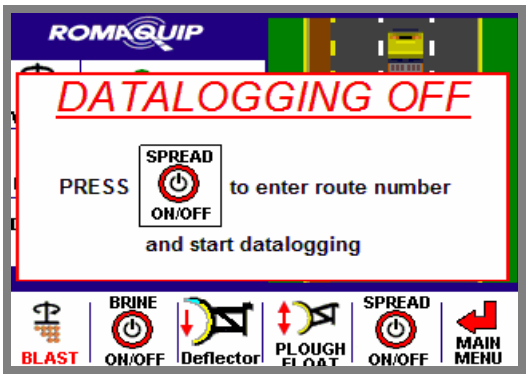
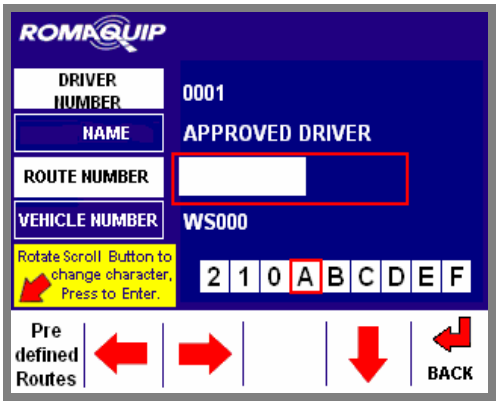
This screen will appear for a few seconds before the main gritting screen appears again.




To start spreading again after the route has been ended, press F5.
The following screen will appear.




While this screen is displayed, press F5 again to enter the route number.
The following screen will appear.




As driver 0001 is already logged in, this will be displayed, to see the pre-defined routes press F1.
The following screen will appear.

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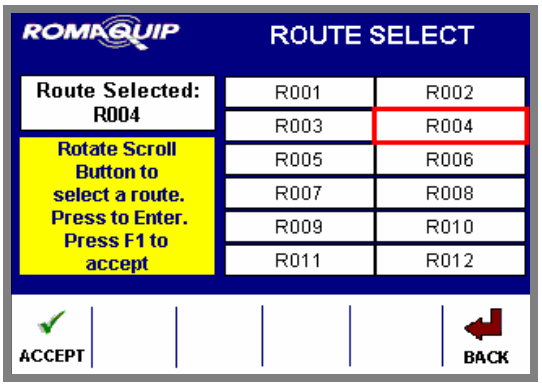
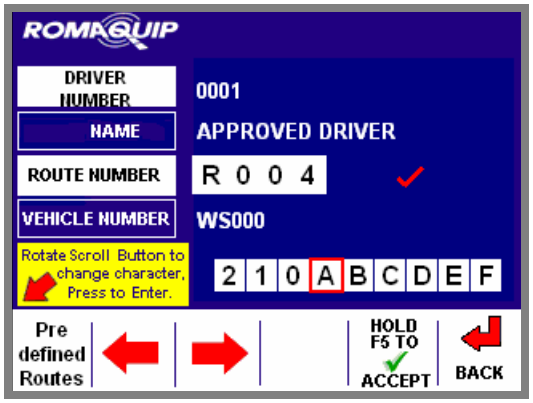
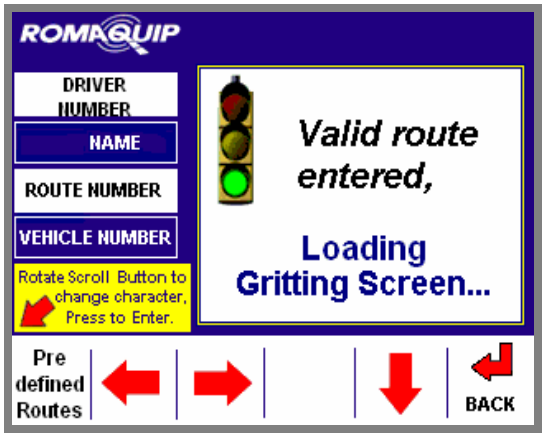



Using the scroll button, scroll to the desired route and press the scroll button to select & F1 to accept.
For example we will select R004.
The following screen will then appear.




Press F5 to accept new route. Press & hold F5 to login new route.
If a valid route number has been entered the following screen will appear.
You can then let go of the F5 Button.




This screen will appear for a few seconds before reverting back to the main spreading screen.

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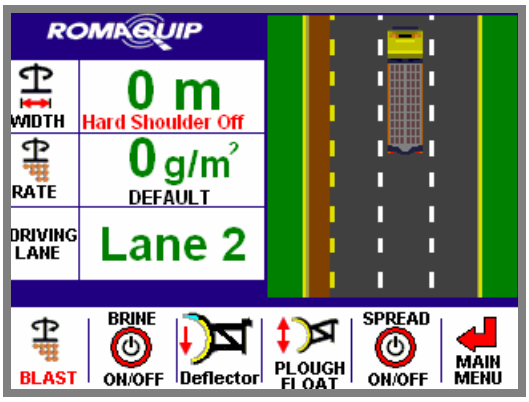
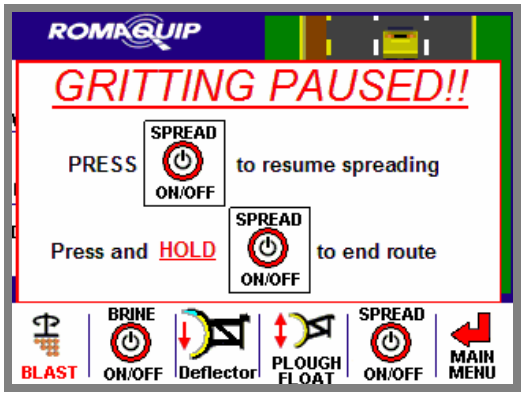
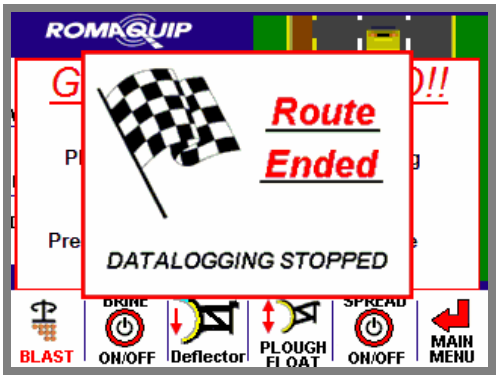



Press F5 to start spreading. The red ring on the spread on/off icon will turn green.
To pause the gritting/spreading press F5, the following screen will appear.
The rear beacons will illuminate when spreading begins, when spreading is either stopped or paused beacons will stop.




To resume spreading press F5 again or to end the route press and hold F5 until the following screen appears.
Note: The gate will remain open when gritting is paused.
Note: Spinner stays on for three seconds after spreading paused or stopped.




All datalogging is stopped and gritting will stop.
The main spreading screen will appear again.

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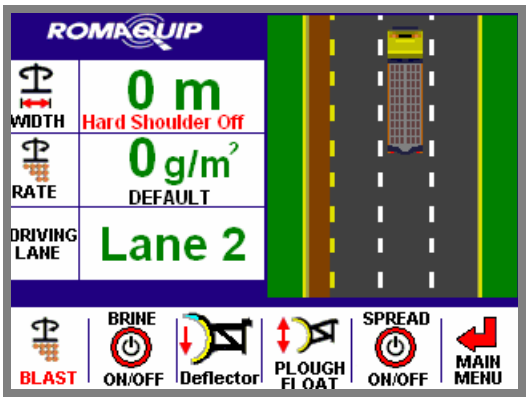
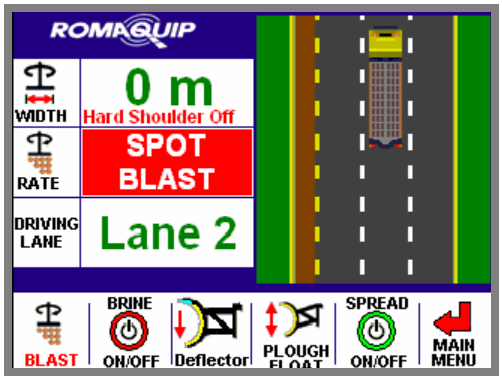
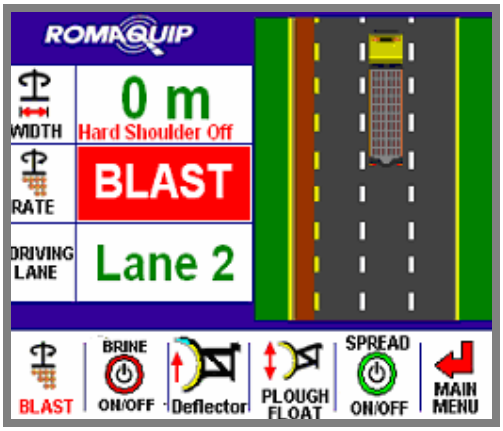



While a route is logged in, Spreading is on and datalogging is running a blast of salt can be sent through the spinner assembly by pressing & holding F1. (When pressing F1 the simulated speed is set to 40km/h which sets off the spot blast).
The screen should look like this until F1 is released.




Spot blast is shown on the screen, Release F1 and the screen will return to the main spreading screen. The spot blast can only be used if the truck is running between 0 – 10km/h.
If the truck is running above 10km an hour spot cannot be used. Blast is used instead. Press F1 when running above 10km and the following screen appears.




The **BLAST** will flash red/white while the salt is been blasted out of the spinner assembly. Press F1 to stop the blast.

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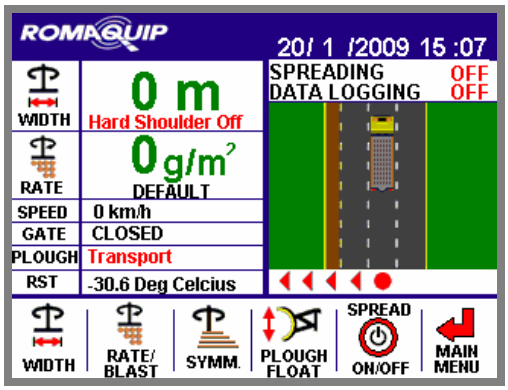
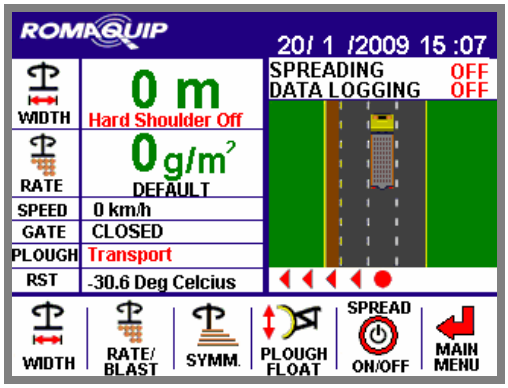
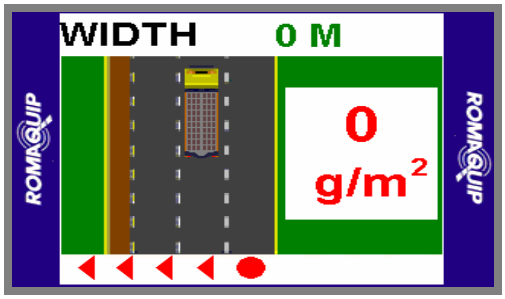
The main spreading screen will appear.




To see a more detailed spreading screen press & hold down the scroll button until the screen changes to the one below.




This screen provides more information for the spread settings.
Press F1 to enter the set the width screen.
The following screen appears.




Use the scroll button to select the spread width, 0-13m.
Press the scroll button to accept new width spread e.g. 8m
The spreading screen appears.

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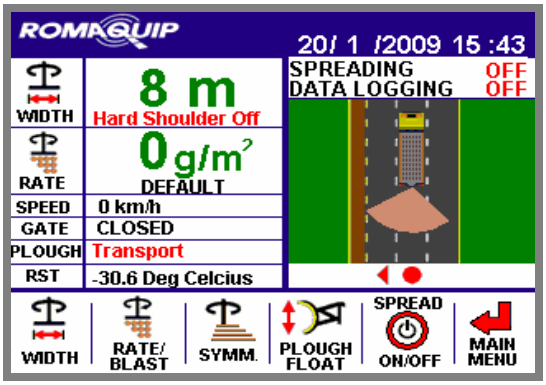
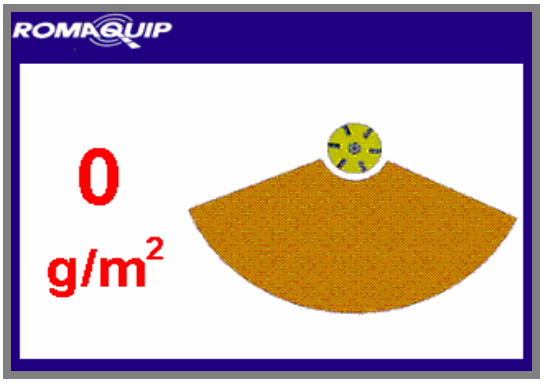
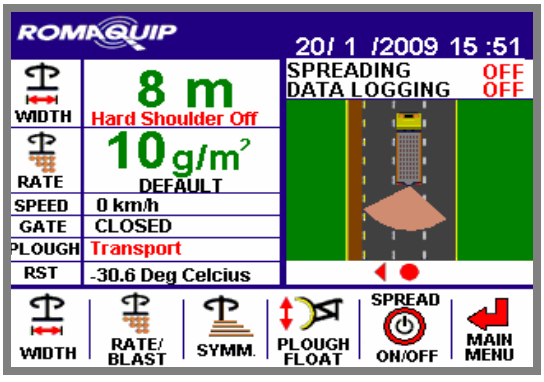



The 8m inputted on the previous screen is shown here.
To change the Rate (g/m2) press F2.
The following screen appears.




Using the scroll button scroll to the desired rate and press the scroll button
For example 10g/m2 needs to be inputted.
After pressing the scroll button, the spreading page is shown again.




The rate has now changed to 10g/m2
To change the Symmetry press F3.
The following screen will apply.

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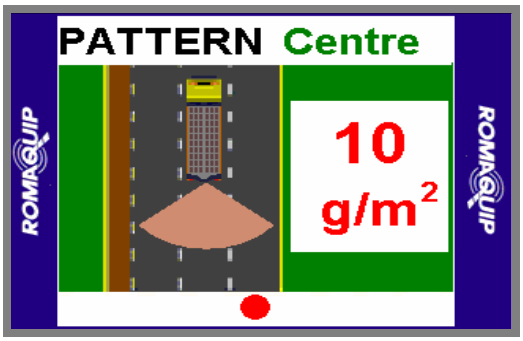
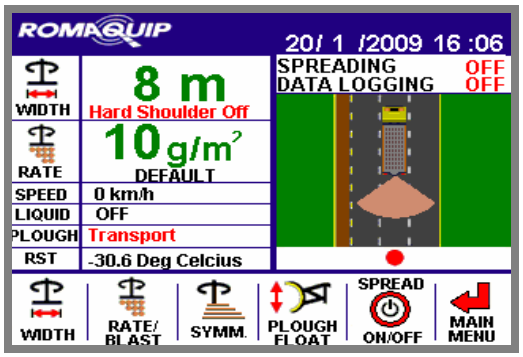
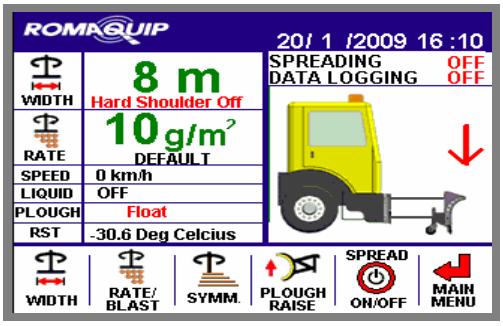



On the left the current spread rate is displayed.
To change the symmetry Use the scroll button to scroll left or right depending on the spread required. The pattern will be displayed on the top and bottom of the screen as you toggle through them.
Press the scroll button when the desired spread pattern is shown, e.g. select the centre pattern. The screen now goes back to the spreading screen.




The symmetry selected can now be seen on the illustration.
To put the plough into the float position press F4.
The following screen will appear.




The illustration will show the plough been lowered to the floating position.
This screen will disappear after a few seconds and the spreading screen will appear.
To raise the plough press F4
The following screen will appear.

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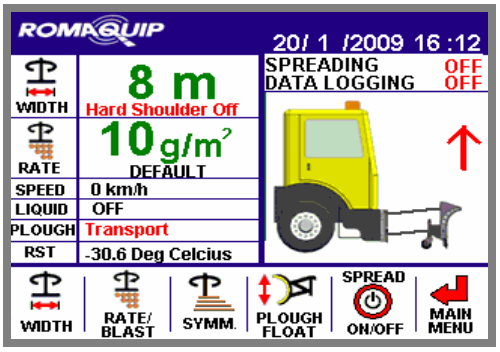
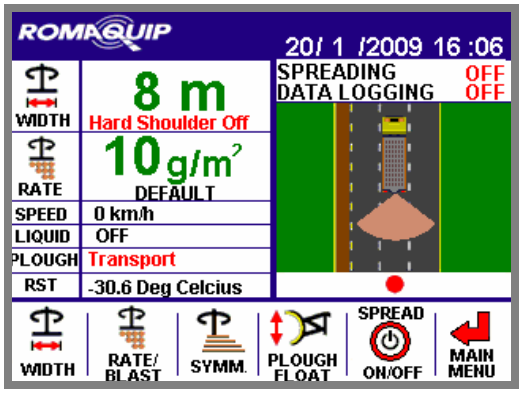
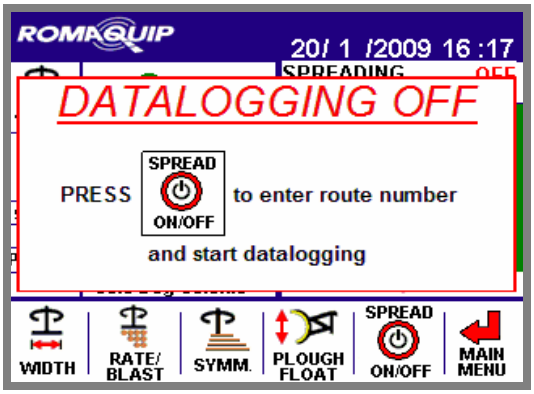



The illustration will show the plough been moved to the transport position.
This screen will disappear after a few seconds and the spreading screen will appear.




To start spreading, press F5.
The following screen will appear.




Press the start spread button (F5) again to enter a route.
The following screen will appear.

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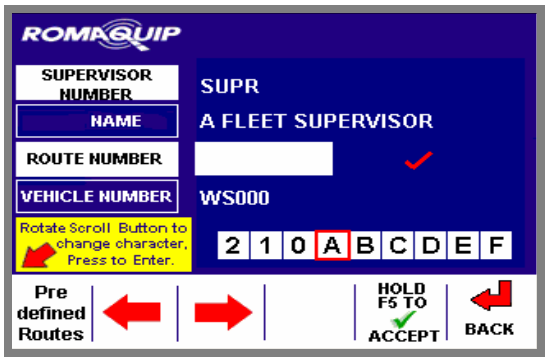
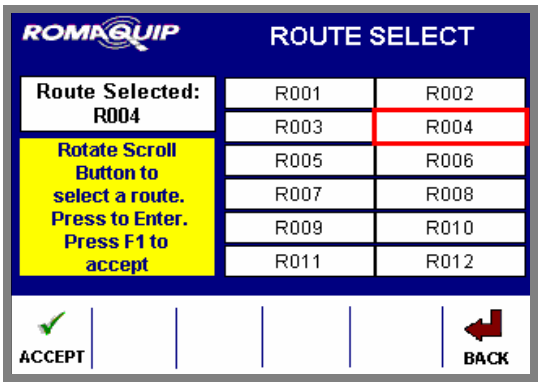
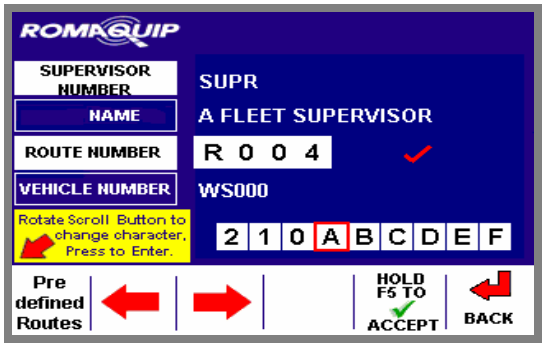



As you are already logged in as a fleet supervisor, it will be shown here.
Press F1 to see the predefined routes already set up.
The following screen appears.




Using the scroll button, scroll to the desired route and press F1 to accept.
For example we will select R004.
The following screen will then appear.




Press & hold F5 to accept the route number.
If a valid route number has been entered the following screen will appear.
You can then let go of the F5 Button.

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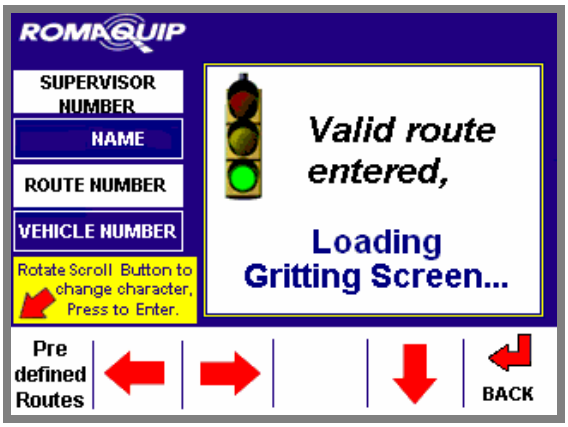
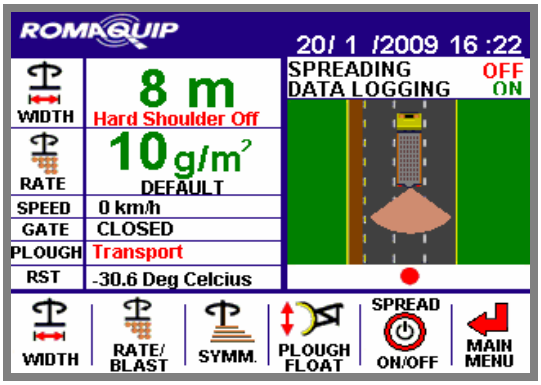
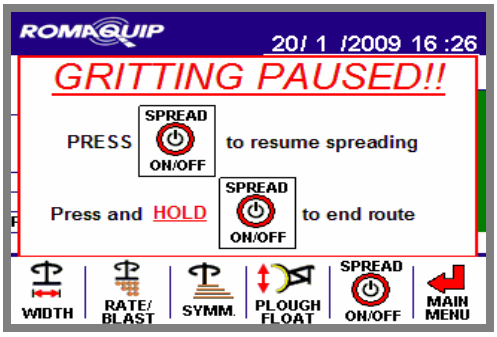



This screen will appear for a split second before reverting back to the main spreading screen.




Datalogging is now enabled. This is shown on the top of the illustration as “ON” in green. To start spread press F5. Spreading is now “ON”
To stop the spreading press F5
The following screen appears.




To resume spreading press F5 again or to end the route press and hold F5
When the route is ended the following screen will appear.

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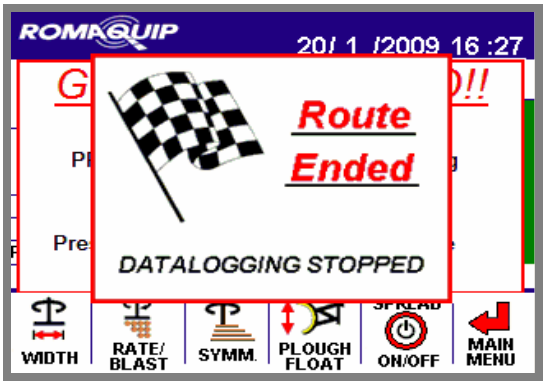
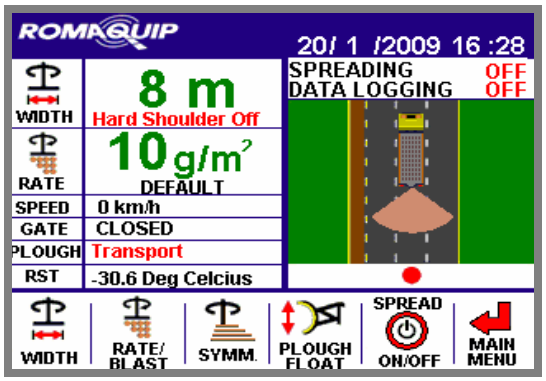



All datalogging is stopped and gritting will stop.
The main spreading screen will appear again.




Other information included on this screen includes.
The current speed of the lorry, in km/h.
Gate open or closed, Liquid on or off.
What state the plough is in either float or transport.
RST – Road surface Temperature. The sensor mounted on the front of the lorry measures this and it is displayed here.

**Press F6 to return to the main screen.**

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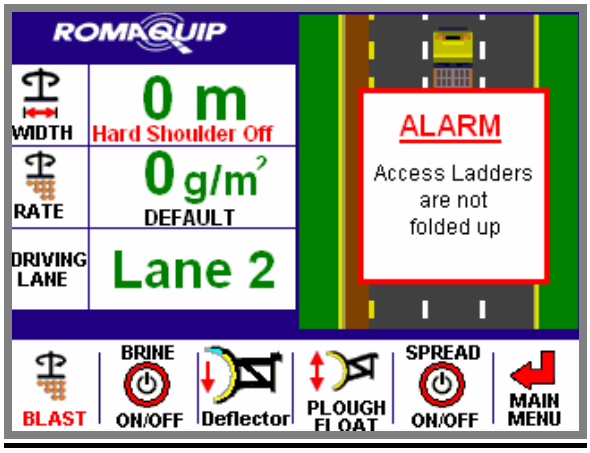
# Note



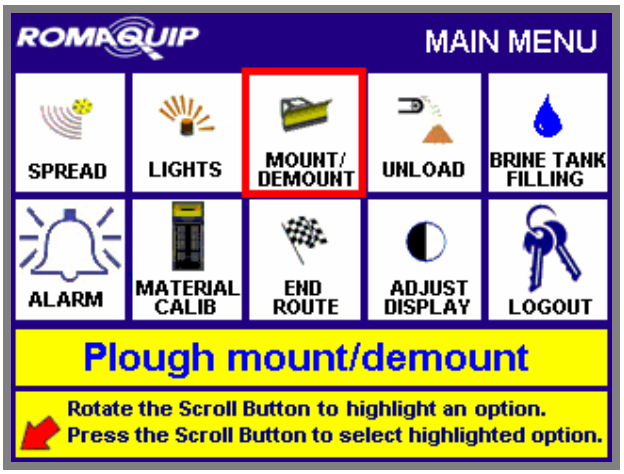

If this alarm pops up on the spreading screen, the access ladders are to be folded up for spreading to commence.

# User Manual (Plough)

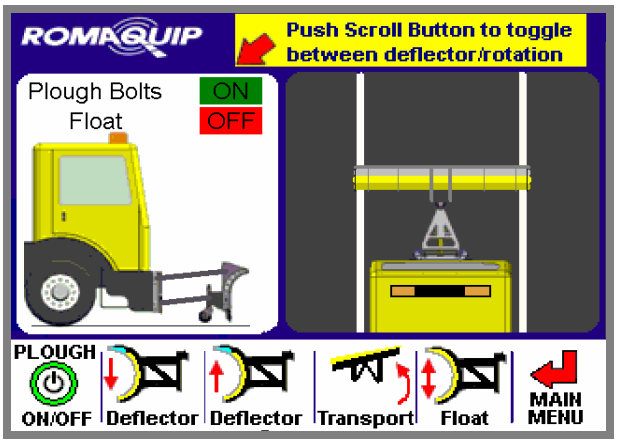
# Mount/Demount

# Plough (Mount/Demount)

Note: When using the scroll button to scroll to a desired setting, a red box will indicate which setting is currently been highlighted




Using the scroll button, scroll to MOUNT/DEMOUNT
The screen below will appear.




The deflector screen appears.
Ensure the plough bolts are in place, this will be indicated by plough bolts ON
Press F1 to turn on the plough.
Press & hold F2/F3 for deflector UP or DOWN.
To put the plough into transport position press & hold F4.
To put the plough into float mode press F5, this will be indicated by the float ON.
To toggle to the plough rotation screen press the scroll button.
The following screen will appear.

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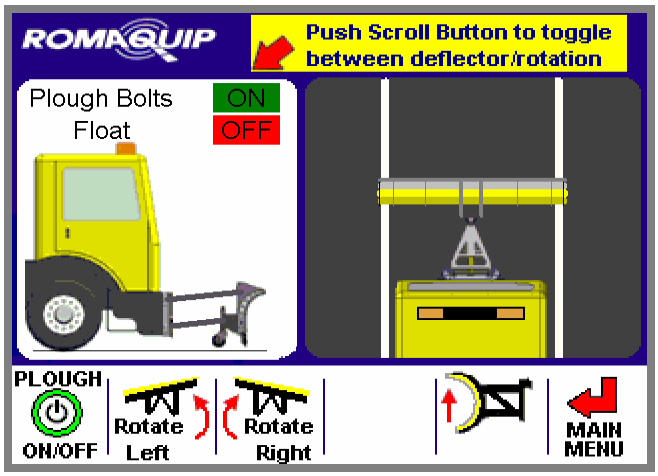
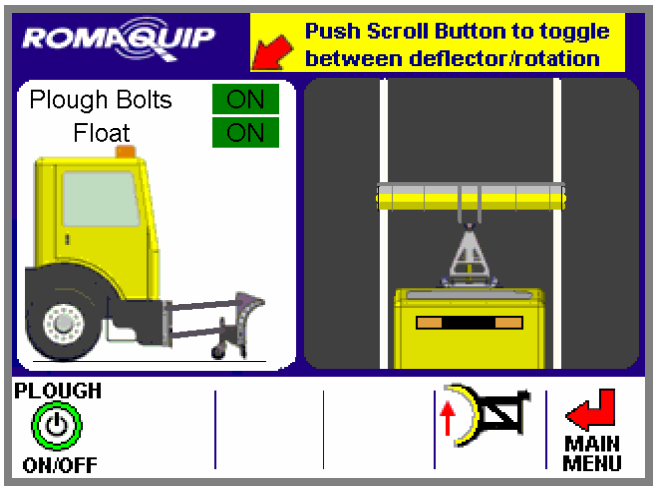



After pressing the scroll button, the icons on the bottom of the screen will change. Press & hold F2 to rotate left & F3 to rotate right. The plough on the right of the screen will change position i.e. left or right.
Press & hold F5 to raise the plough.

On the deflection screen i.e. the first screen that appears when you enter the mount/demount mode, if the float is activated i.e." ON" and you then toggle to the deflection screen by pressing the scroll button the following screen will appear.

+




The icons for the left and right rotation of the plough are not visible. The plough cannot be rotated left or right while the plough is in float mode.
To raise the plough, press & hold F5.
The following screen will appear.

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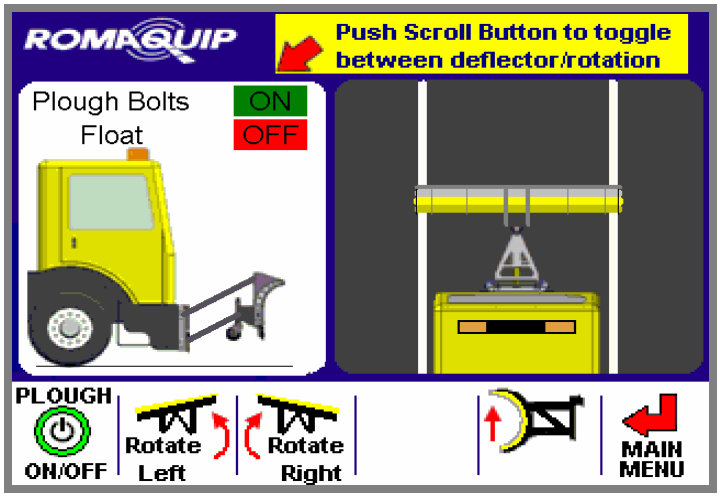



The icons for rotating the plough left and right re-appear, and the float is indicated as "OFF".

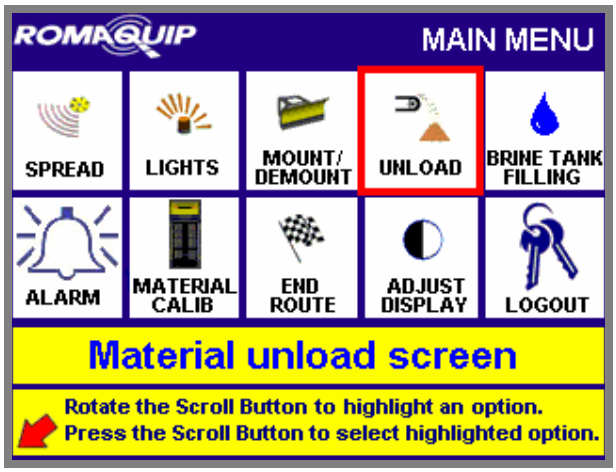
**To return to the main Menu press F6.**

# User Manual

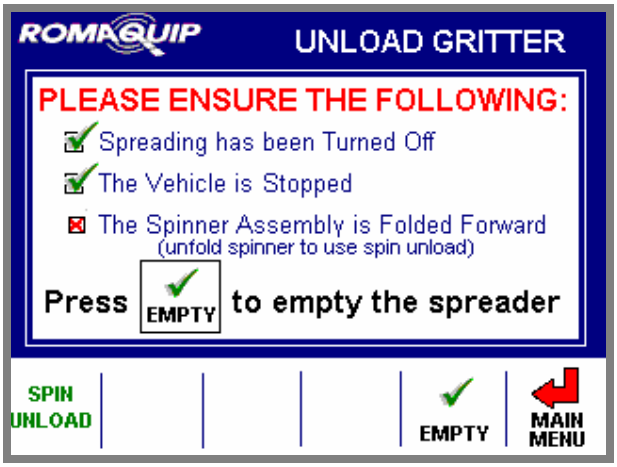
# Unload

# UNLOAD

Note: When using the scroll button to scroll to a desired setting, a red box will indicate which setting is currently been highlighted




Using the scroll button, scroll to UNLOAD.
Press the scroll button to select.
The screen below will appear.




This screen will display the options to unload the gritter.
On the example above; spreading is turned off and the vehicle is stopped, this is indicated by the ✓ in the box. However the spinner assembly is still folded forward i.e. in the spinner ready position. In order to empty the spreader the spinner assembly will have to be pushed in, when this is done the ✓ will appear in the box.
When all boxes are marked with ✓ the gritter can be emptied by pressing the F5 button.
The following screen will appear.

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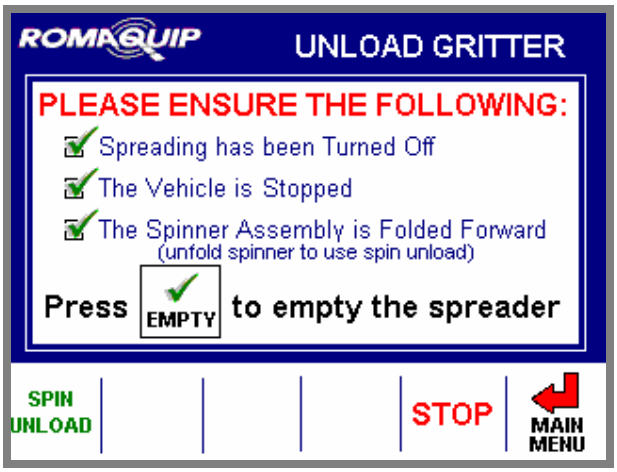
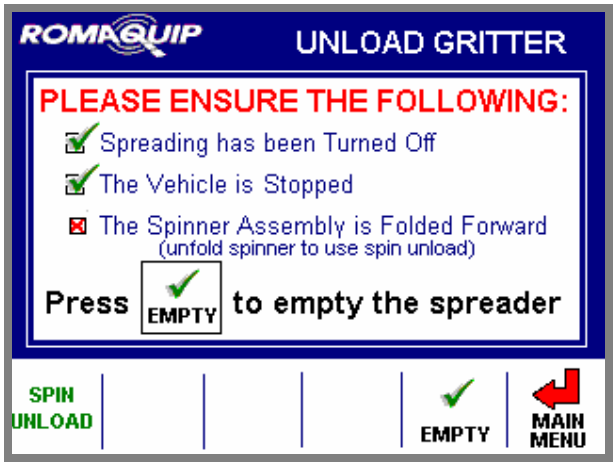



The gritter has started to unload the salt.
To stop unloading the press F5.

When using this option the salt will be dumped directly out of the hooper.
**Alternately** a spin unload can be done by pressing F1. This allows the salt to be dumped from the gritter via the spinner.
To use the spin unload the spinner has to be in the ready position i.e. ☒ is shown in the spinner assembly folded forward box as shown below.




Spreading has been turned off and the vehicle is stopped as indicated with ✓ .
Spinner assembly is in the ready position as indicated with ☒.
Press F1 to do a spin unload.
The following screen will appear.

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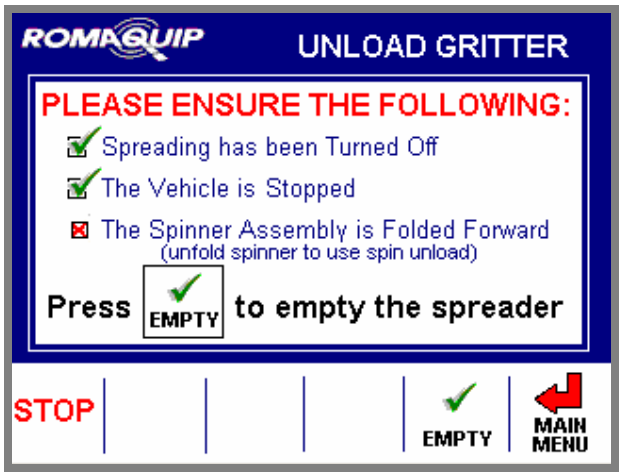



Press F1 to stop the spin unload.

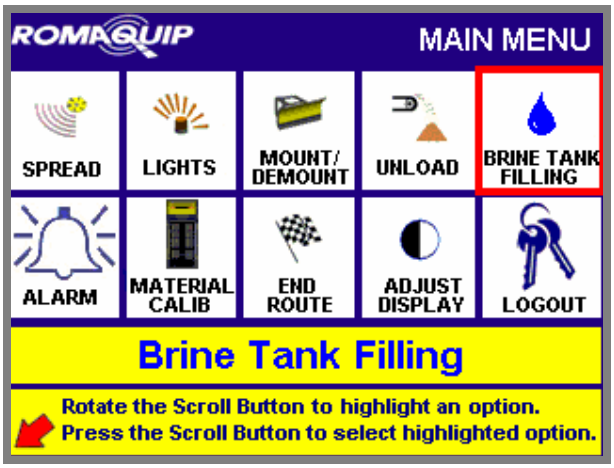
**Unloading of the salt complete, press F6 to return to the main screen.**

# User Manual

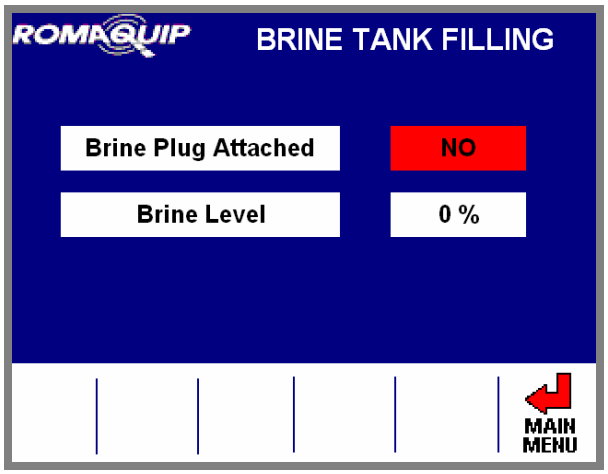
# Brine Tank Filling

# Brine Tank Filling

Note: When using the scroll button to scroll to a desired setting, a red box will indicate which setting is currently been highlighted




Using the scroll button, scroll to Brine Tank Filling
Press the scroll button to select.
The screen below will appear.




This screen will appear if the brine plug has not been attached.
The brine level shown above is 0%. This states that there is no brine currently in the tank.
If the brine plug is attached the following screen will appear.

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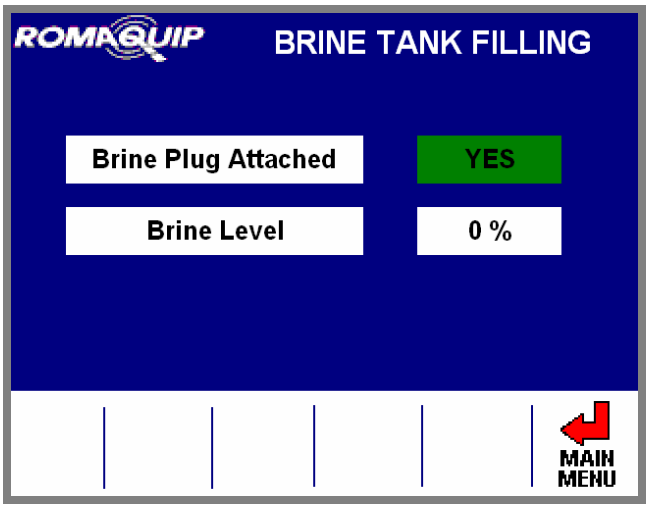
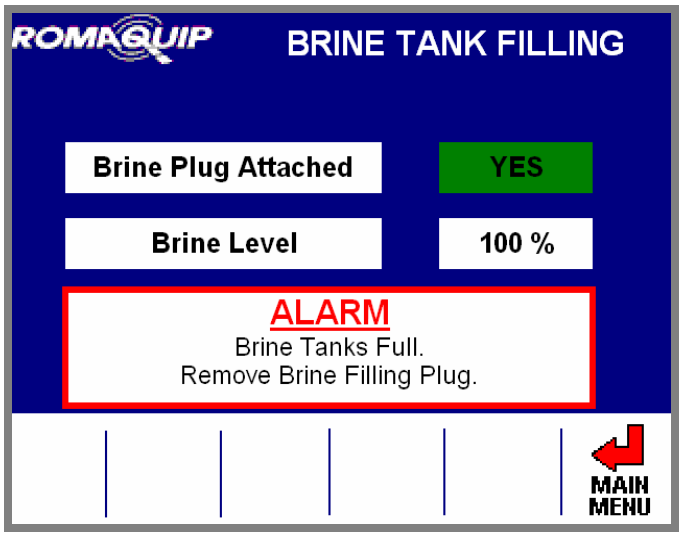



"Yes" is displayed in the box to show the brine plug is attached.
Brine filling can now commence.
When the tank reaches 100% the following screen will appear.




When the tank reaches 100% an alarm appears saying the tank is full and the brine plug is too be removed.

**Brine Tank Filling complete, press F6 to return to the main screen.**

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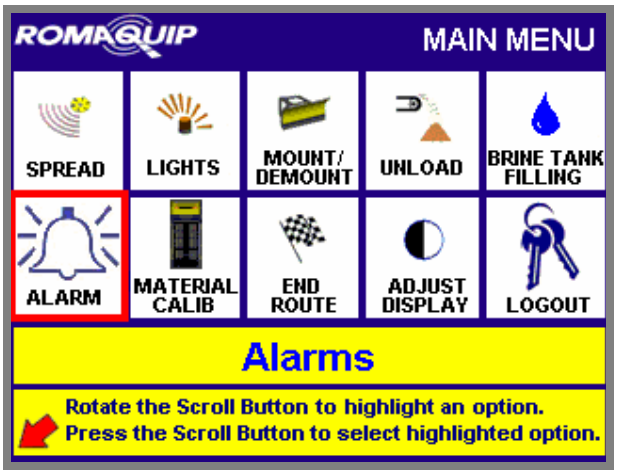
# User Manual

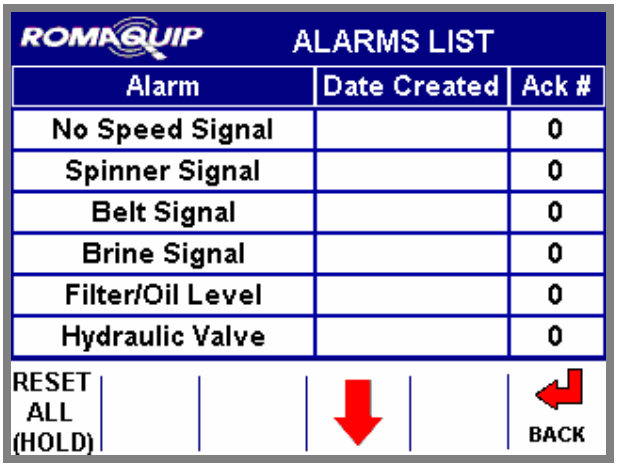
# Alarms

# Alarms

Note: When using the scroll button to scroll to a desired setting, a red box will indicate which setting is currently been highlighted.




Using the scroll button, scroll to ALARM
Press the scroll button to select.
The following screen appears.




This screen will display all the alarms that have been created including the date and time of each alarm and how many times it was acknowledged or accepted. Use the F4 button to scroll down through the list and F5 to scroll back up the list.

To reset the alarms, press and hold the F1 button.

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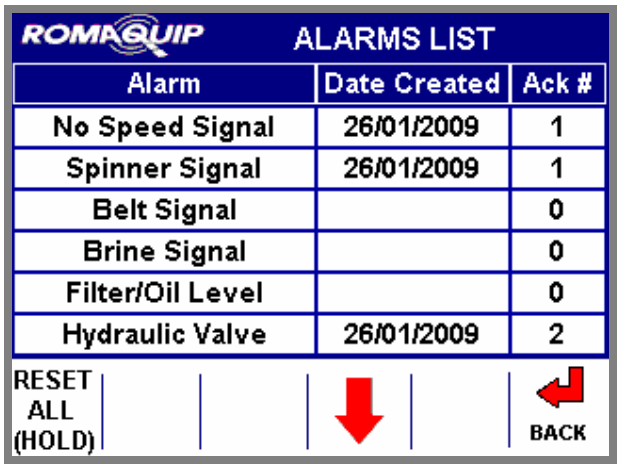
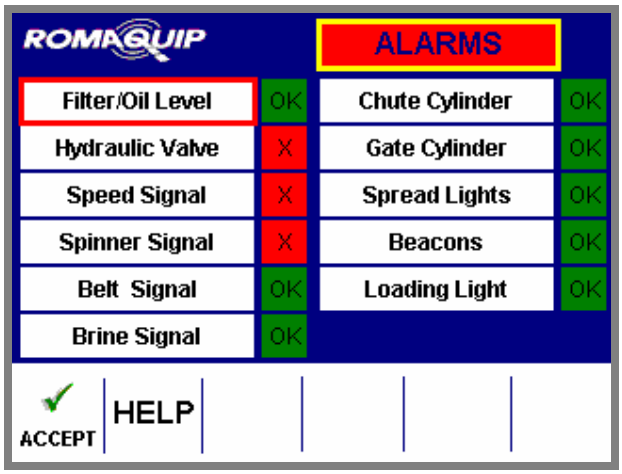
# Example




The above screen shows alarms that were created on 26/01/2009 and how many times they were accepted by the user, for example the hydraulic valve was accepted twice by the user.

When an alarm is triggered the following screen appears.




This screen shows which alarm has been triggered, this is indicated by X in the box next to the alarm that has been triggered. All other alarms will have OK next to them.

If HELP is required to acknowledge the alarm press F2

The following screen will appear.

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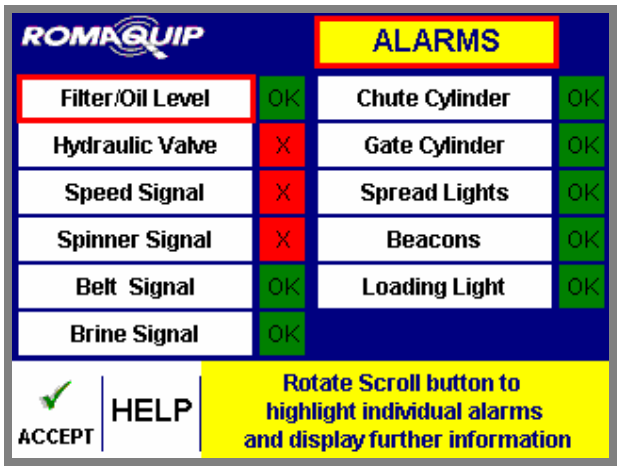
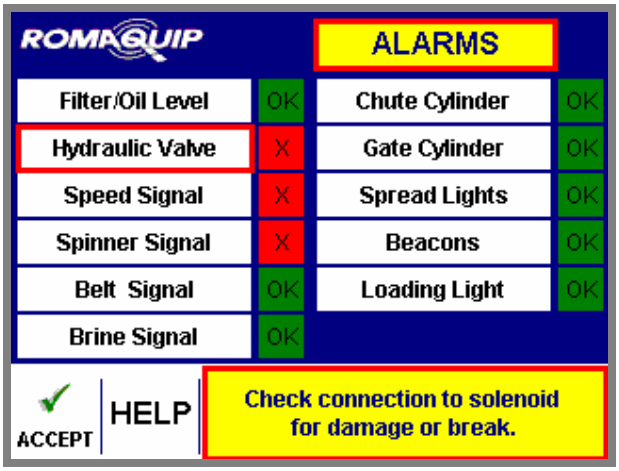



The information bar appears on the bottom of the screen for a few seconds. Scroll to the alarm or alarms triggered. When it has been highlighted a possible cause of the alarm will appear. If for example we scroll to Hydraulic Valve, The following screen will appear.




The information bar shows a possible cause. In this case the user is to check the solenoid for damage of break.

To accept the alarms press F1.

The main alarm screen will appear.

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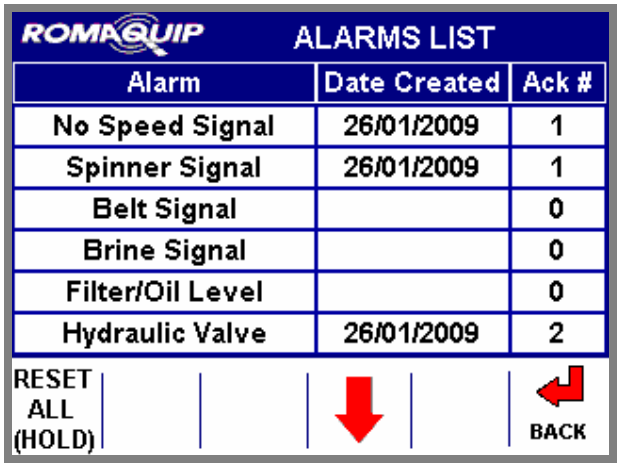



Press and hold F1 to reset all the alarms.

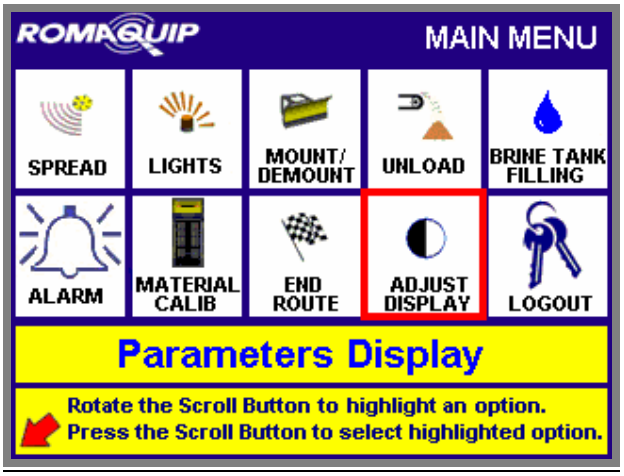
**Press F6 to go back to the main setup page.**

# User Manual

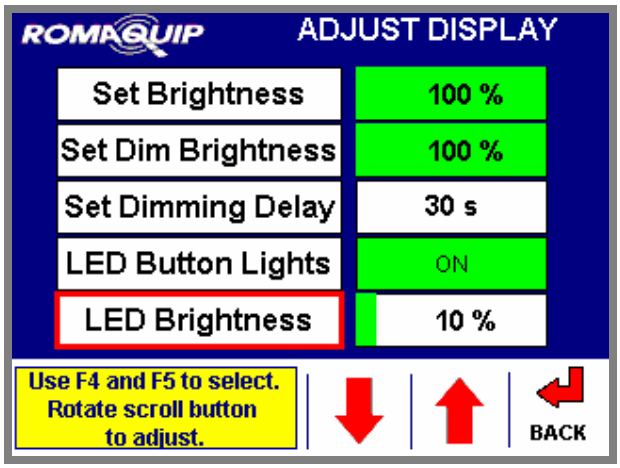
# Adjust Display, End Route, Lights & Logout

# ADJUST DISPLAY

Note: When using the scroll button to scroll to a desired setting, a red box will indicate which setting is currently been highlighted




Using the scroll button, scroll to Adjust Display.
Press the scroll button to accept.
The following screen will appear.




This screen will display the display settings.
Set brightness corresponds to the brightness of the screen.
The dim brightness is the brightness that the PDM screen resets itself too after a period of time which is set under dimming delay.
LED button lights are the LED's (Light Emitting Diode) which light up under buttons F1-F6 The brightness for these is controlled under the LED Brightness setting.
To change any of these settings use F4 or F5 to select and the scroll button to select the desired setting.

NOTE: If the LED Button lights are set of OFF, the LED Brightness cannot be used.

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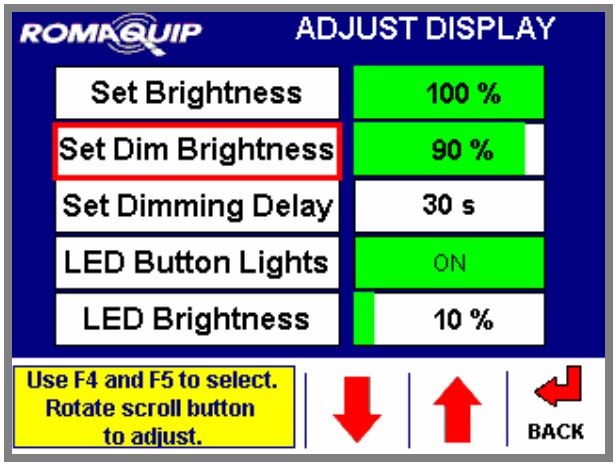
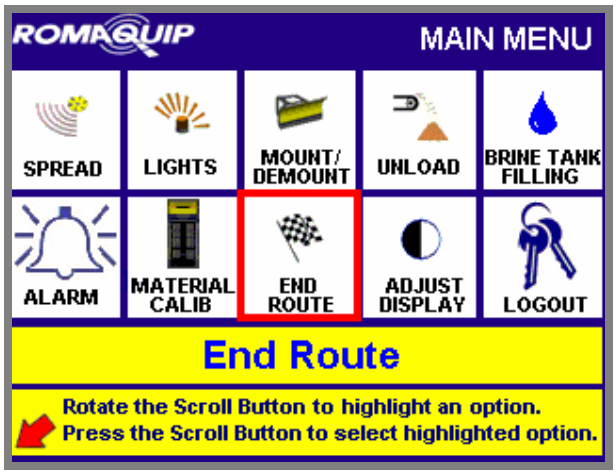


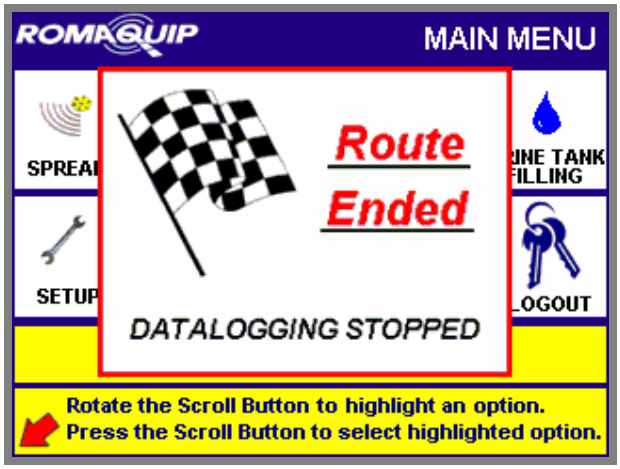

The example above show the brightness of the screen at 100%, but after a period of 30s (30Seconds), the screen brightness will become 90%. The LED button lights are set to ON and there brightness is 10%.

**Press F6 when desired settings are inputted, the main screen will appear.**

# END ROUTE




Using the scroll button, scroll to END ROUTE.
Press the scroll button to accept.
The following screen will appear.




When a route is entered in the spreading screen, (see spread manual for info.) it can be ended by scrolling to end route on the main screen then press the scroll button to end the route. The above screen will appear for 5 seconds before reverting back tot the main screen, thus the route has ended and all datalogging has stopped.

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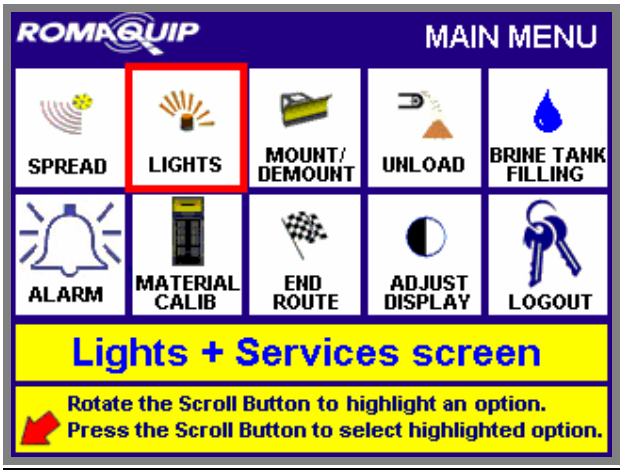
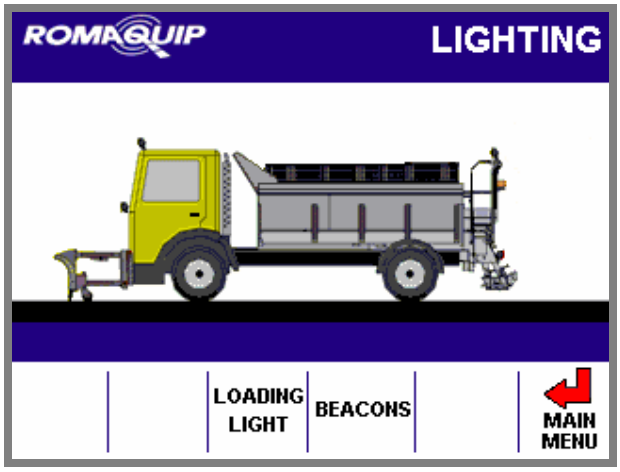
# LIGHTS

Note: When using the scroll button to scroll to a desired setting, a red box will indicate which setting is currently been highlighted




Using the scroll button, scroll to LIGHTS.
Press the scroll button to accept.
The following screen will appear.




This screen displays the lights that can be manually switched on
Press F3 to switch on the loading light & press F4 to switch on the beacons.
When both of these a switched on the following screen will appear.

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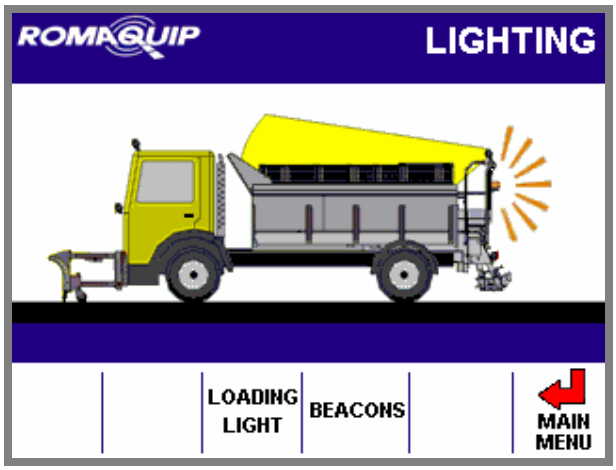


When each light is switched on the screen will show them illuminated.
The loading light is indicated with the yellow beam and the beacons are showing flashing.
Always check and see if the lights are working on the lorry.

**Press F6 to return to the main screen.**

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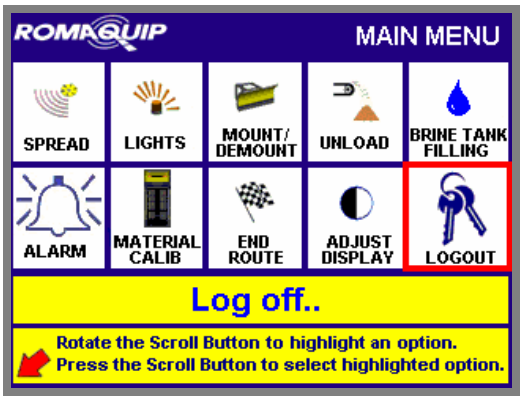
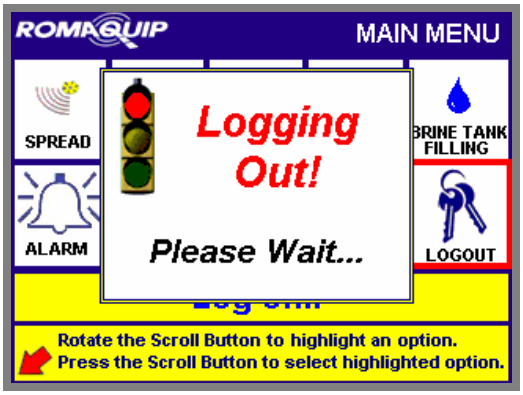
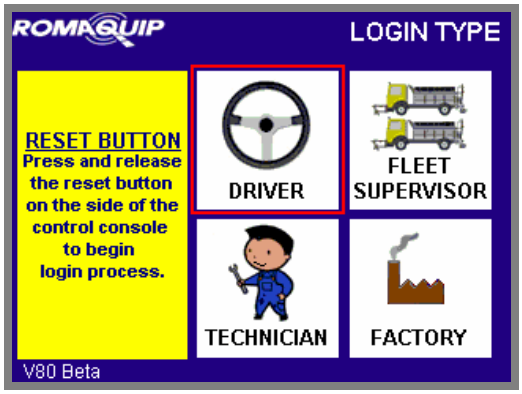
# LOGOUT




To Logout of the system, scroll to logout.
Press the scroll button to accept.
The following screen will appear.




The above message will pop up for a couple of seconds.
The login screen will then appear. You are now logged out of the system.




To log back in select the relevant login type and input appropriate user name and password.

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